

GE Healthcare 510(k) Premarket Notification Submission

510(k) Summary

In accordance with 21 CFR 807.92 the following summary of information is provided:

Date: July 16, 2012

Submitter: GE Healthcare

9900 Innovation Dr Wauwatosa, WI 53226

Primary Contact Person: Bryan Behn

Regulatory Affairs Manager

GE Healthcare T:(414)721-4214 F:(414)918-8275

Device: Trade Name: LOGIQ S7 Expert and LOGIQ S7 Pro Ultrasound System

Common/Usual Name: LOGIQ S7 Expert and LOGIQ S7 Pro

Classification Names: Class II

> Ultrasonic Pulsed Doppler Imaging System. 21CFR 892.1550 90-IYN **Product Code:**

Ultrasonic Pulsed Echo Imaging System, 21CFR 892.1560, 90-IYO

Diagnostic Ultrasound Transducer, 21 CFR 892.1570, 90-ITX

Predicate Device(s): K111582 LOGIO S8 Diagnostic Ultrasound System

K092271 LOGIQ E9 Diagnostic Ultrasound System K101874 LOGIQ P6 Diagnostic Ultrasound System K113690 LOGIQ e Diagnostic Ultrasound System

K112213 Voluson E6/E8/E8 Expert Diagnostic Ultrasound

System

The LOGIQ S7 Expert AND LOGIQ S7 Pro is a full featured, Device Description:

general purpose diagnostic ultrasound system which consists of a mobile console approximately 62 cm wide, 86 cm deep and 175 cm high that provides digital acquisition, processing and display capability. The user interface includes a computer keyboard, specialized controls, 7-inch LCD touch screen and color 19-inch

LCD image display.

Intended Use: The device is intended for use by a qualified physician for

ultrasound evaluation of Fetal; Abdominal; Pediatric; Small. Organ (breast, testes, thyroid); Neonatal Cephalic: Adult Cephalic; Cardiac (adult and pediatric); Peripheral Vascular: Musculo-skeletal Conventional and Superficial;



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(including prostate); Transrectal; Transvaginal and Intraoperative (abdominal, thoracic, vascular and neurosurgical).

Technology:

The LOGIQ S7 Expert and LOGIQ S7 Pro employs the same fundamental scientific technology as its predicate devices

<u>Determination of</u> Substantial Equivalence:

Summary of Non-Clinical Tests:

The device has been evaluated for acoustic output, biocompatibility, cleaning and disinfection effectiveness as well as thermal, electrical, electromagnetic, and mechanical safety, and has been found to conform to applicable medical device safety standards. LOGIQ S7 Expert and LOGIQ S7 Pro and its applications comply with voluntary standards:

- 1. IEC60601-1, Medical Electrical Equipment Part 1: General Requirements for Safety
- IEC60601-1-2, Medical Electrical Equipment –
 Part 1-2: General Requirements for Safety Collateral
 Standard: Electromagnetic Compatibility
 Requirements and Tests
- IEC60601-2-37, Medical Electrical Equipment Part 2-37:Particular Requirements for the Safety of Ultrasonic Medical Diagnostic and Monitoring Equipment
- 4. NEMA UD 3, Standard for Real Time Display of Thermal and Mechanical Acoustic Output Indices on Diagnostic Ultrasound Equipment
- 5. ISO10993-1, Biological Evaluation of Medical Devices- Part 1: Evaluation and Testing- Third Edition
- 6. NEMA UD 2, Acoustic Output Measurement Standard for Diagnostic Ultrasound Equipment
- 7. ISO14971, Application of risk management to medical devices
- 8. NEMA, Digital Imaging and Communications in Medicine (DICOM) Set. (Radiology)



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The following quality assurance measures were applied to the development of the system:

- Risk Analysis
- Requirements Reviews
- Design Reviews
- Testing on unit level (Module verification)
- Integration testing (System verification)
- Final Acceptance Testing (Validation)
- Performance testing (Verification)
- Safety testing (Verification)

Transducer materials and other patient contact materials are biocompatible.

Summary of Clinical Tests:

The subject of this premarket submission, LOGIQ S7 Expert and LOGIQ S7 Pro, did not require clinical studies to support substantial equivalence.

Conclusion:

GE Healthcare considers the LOGIQ S7 Expert and LOGIQ S7 Pro to be as safe, as effective, and performance is substantially equivalent to the predicate device(s).



10903 New Hampshire Avenue Silver Spring, MD 20993

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GE Healthcare c/o Bryan Behn 9900 Innovation Dr. Wauwatosa, WI 53226

Re: K122114

Trade Name: LOGIQ S7 Expert

LOGIO S7 Pro Ultrasound System

Regulation Number: 21 CFR §892.1550

Regulation Name: Ultrasonic pulsed doppler imaging system

Regulatory Class: Class II

Product Codes: IYN, IYO, ITX

Dated: July 16, 2012 Received: July 17, 2012

Dear Mr. Behn:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

This determination of substantial equivalence applies to the following transducers intended for use with the LOGIQ S7 Expert and LOGIQ S7 Pro, as described in your premarket notification:

Transducer Model Number

C1-5-D	L8-18i-D	11L-D
9L-D	S4-10-D	8C
ML6-15	P2D	3Sp-D
IC5-9-D	P6D	·
3CRF-D	RAB4-8-D	

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the <u>Federal Register</u>.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus permits your device to proceed to market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to

http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

If you have any questions regarding the content of this letter, please contact Joshua Nipper at (301) 796-6524.

Sincerely Yours,

Janine M. Morris

Director

Division of Radiological Health Office of In Vitro Diagnostics and

Radiological Health

Center for Devices and Radiological Health

Enclosure(s)



510(k) Number_

GE Healthcare

510(k) Premarket Notification Submission

510(k) Number (if known):	K122114	
Device Name: LOGIQ S7 Exp	ert and LOGIQ S7	Pro
Indications for Use:		•
The device is intended for use by a qu Abdominal; Pediatric; Small Organ (b Cephalic; Cardiac (adult and pediatric Conventional and Superficial; Urolog and Intraoperative (abdominal, thorac	oreast, testes, thyroic); Peripheral Vascu y (including prostate	d); Neonatal Cephalic; Adult lar; Musculo-skeletal e); Transrectal; Transvaginal
Prescription Use_x AN (Part 21 CFR 801 Subpart D)	D/OR	Over-The-Counter Use_NA_ (Part 21 CFR 801 Subpart C)
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510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro Ultrasound System

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

					M	ode of Ope	eration				
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic			ļ								
Fetal / Obstetrics ^[7]	N	N	N	N	N	N	N	N	N	N	5,6
Abdominal ^[1]	N	N	N_	N	N	N	N	N	N	N	3,5,6
Pediatric	N	N	N_	N	N	N	N	N	N	N	3,5,6
Small Organ ^[2]	N	N	N	N	N	N	N	N	N	N	3,5,6
Neonatal Cephalic	· N	N.	N	N	N	N	Ν.	N	N	N	5,6
Adult Cephalic	N	N	N	N	N	N	N	N	N	N	5,6
Cardiac Adult & Pediatric	N	N	N	N	N	N	N	N	N	N	
Peripheral Vascular	N	N	N	N	N	N_	N	N	N	N	3,5,6
Musculo-skeletal Conventional	N	N	N	N	N	N	N	N	N	N	3,5,6
Musculo-skeletal Superficial	N	N	N	N	N	N	N	N	N	N_	3,5,6
Other ^[4]	N	N	N	N	N	N	N	N	N	N	3,5,6
Exam Type, Means of Access		<u> </u>									
Transesophageal			<u> </u>	ļ		 					3.5.6
Transrectal ^[8]	N	N	N	N	N	N	N	N	N	N	3,5,6
Transvaginal	N	N	N	N	N	N ·	N	N	N	N	3,5,6
Transuretheral			 			-		ļ			
Intraoperative ^[8]	N	N	N	N	N	N	N	N	N	N	3,5,6
Intraoperative Neurological	N	N	N	N	N	N	. N	N	N	N_	
Intravascular			ļ ·	 	ļ	 		<u> </u>			ļ
Laparoscopic			<u> </u>	<u></u>							

N = new indication; P = previously cleared by FDA;

Notes: [1] Abdominal includes Renal, GYN/Pelvic.
[2] Small organ includes breast, testes and thyroid

- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Prescription User (Per 21 CFR 801.109)

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Division of Radiological Devices

Office of In Vitro Diagnostic Device Evaluation and Safety

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Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with C1-5-D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation												
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power	Combined Modes	Harmonic Imaging	Coded Pulse	Other [Notes)		
Ophthalmic													
Fetal / Obstetrics ^[7]	P	P	P	P	P	P	P	P	P	P	5,6		
Abdominal ^[1]	P	P	P	, P	P	P	P	P	P	P.	3,5,6		
Pediatric	P	P	Р	P	P	P	P	P	Р	P	3,5,6		
Small Organ ^[2]													
Neonatal Cephalic													
Adult Cephalic													
Cardiac Adult & Pediatric				<u> </u>						Ŀ			
Peripheral Vascular	P	P	P	P	P	P	P	P	P	P	3,5,6		
Musculo-skeletal Conventional	_												
Musculo-skeletal Superficial											<u> </u>		
Other ^[4]	P	P	P	P	P	P	P	P	P	P	3,5,6		
Exam Type, Means of Access													
Transesophageal													
Transrectal ^[8]													
Transvaginal							-						
Transuretheral			<u> </u>										
Intraoperative ^[8]									·				
Intraoperative Neurological													
Intravascular													
Laparoscopic			55.000	<u> </u>									

N = new indication; P = previously cleared by FDA (K111582)

Notes:

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with 9L-D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

					M	ode of Op		-			
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler		Combined Modes	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics[7]	P	P	P		P	P	P	P	P	P	5,6
Abdominal ^[1]	P	P	P		P	P	P	P	P	P	3,5,6
Pediatric	P	P	P		P	P	P	P	P	P	3,5,6
Small Organ ⁽²⁾	P	P	P		P	P	P_	Р_	P	P	3,5,6
Neonatal Cephalic				L							<u> </u>
Adult Cephalic			ļ <u> </u>				ļ	ļ <u> </u>			
Cardiac Adult & Pediatric			ļ						ļ		<u> </u>
Peripheral Vascular	P	P	P		Ρ.	P	P	P	P	P	3,5,6
Musculo-skeletal Conventional	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Superficial	P	P	P		P	P	P	P	P	P	3,5,6
Other ^[4]									ļ		
Exam Type, Means of Access			<u> </u>								<u> </u>
Transesophageal					<u> </u>			ļ			ļ
Transrectal ⁽⁸⁾		L	ļ	ļ		ļ	ļ <u>-</u>	<u> </u>			ļ
Transvaginal		ļ	ļ	ļ		<u> </u>		ļ <u>.</u>		_	<u> </u>
Transuretheral		ļ			<u> </u>	· ·	<u> </u>		· ·	ļ	ļ
Intraoperative ^[8]		<u> </u>	 -						<u> </u>	_	
Intraoperative Neurological		<u> </u>	<u> </u>	<u> </u>	 	 		<u> </u>	ļ		
Intravascular			1	<u> </u>		<u> </u>					
Laparoscopic		l	<u> </u>	<u> </u>		<u> </u>		<u> </u>	<u> </u>	l	<u> </u>

N = new indication: P = previously cleared by FDA (K111582)

[1] Abdominal includes Renal, GYN/Pelvic.

- [2] Small organ includes breast, testes and thyroid -
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with ML6-15 Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation												
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes)		
Ophthalmic											·		
Fetal / Obstetrics[7]			<u> </u>										
Abdominal ^[1]													
Pediatric	P	P	P		P	P	P	P	P	P	3,5,6		
Small Organ ^[2]	P	P	P		Ρ.	P	P	P	P	P	3,5,6		
Neonatal Cephalic	N	N	N		N	N	N	N	N	N			
Adult Cephalic													
Cardiac Adult & Pediatric	,												
Peripheral Vascular	P	P	P		P	P	P	P	P	P	3,5,6		
Musculo-skeletal Conventional	N	N	N		N	N	N	N	· N	N	3,5,6		
Musculo-skeletal Superficial	N	N	N		N ·	N	N	N	N	N	3,5,6		
Other ^[4]													
Exam Type. Means of Access	·		<u> </u>										
Transesophageal													
Transrectal ^[8]				,		ļ					_		
Transvaginal			1					,					
Transuretheral								1			· ·		
Intraoperative ^[8]			ļ										
Intraoperative Neurological			 										
Intravascular			ļ					<u></u>					
Laparoscopic						<u> </u>							

N = new indication; P = previously cleared by FDA (K101874)

Notes: [1] Abdominal includes Renal, GYN/Pelvic.

- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with IC5-9-D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation											
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes	Harmonic Imaging	Coded Pulse	Other [Notes)	
Ophthalmic								<u> </u>				
Fetal / Obstetrics ^[7]	P	P	P		P	P	P	P	P	P	5,6	
Abdominal ^[1]			<u> </u>									
Pediatric												
Small Organ ^[2]							·					
Neonatal Cephalic			ļ						,			
Adult Cephalic			<u> </u>									
Cardiac Adult & Pediatric			<u> </u>									
Peripheral Vascular												
Musculo-skeletal Conventional										_		
Musculo-skeletal Superficial							<u> </u>			_		
Other ⁽⁺⁾	P	P	P		P	. Р	P	P	P	P	3,5,6	
Exam Type, Means of Access								<u> </u>				
Transesophageal .								<u> </u>				
Transrectal ^[8]	P	P	P		P	P	P	P	P	P	3,5,6	
Transvaginal	P	P	P		P	P	P	P	P	P	3.5,6	
Transuretheral				ļ			ļ					
Intraoperative ^[8]					<u> </u>			<u> </u>				
Intraoperative Neurological					, ,		<u> </u>	<u> </u>				
Intravascular				<u> </u>	_							
Laparoscopic												

N = new indication; P = previously cleared by FDA (K111582)

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with 3CRF-D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation											
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M			Harmonic Imaging	Coded Pulse	Other [Notes)	
Ophthalmic			<u> </u>						ļ	·		
Fetal / Obstetrics ^[7]	P	P	P		P	P	P	P	P	P	5,6	
Abdominal ^[1]	P	P	P		P	P	P	P	P	P	5,6	
Pediatric	P	P	P		P	P	P	P	P	P	5,6	
Small Organ ^[2]								ļ				
Neonatal Cephalic			ļ									
Adult Cephalic				<u> </u>								
Cardiac Adult & Pediatric												
Peripheral Vascular				<u></u>						ļ <u> </u>		
Musculo-skeletal Conventional												
Musculo-skeletal Superficial								<u> </u>				
Other ^[4]	P	P	P		P	P	P	P	P	P	5,6	
Exam Type, Means of Access												
Transesophageal												
Transrectal ⁽⁸⁾								ļ				
Transvaginal												
Transuretheral			ļ									
Intraoperative ^[8]												
Intraoperative Neurological												
Intravascular						ļ					ļ	
Laparoscopic						<u> </u>		<u> </u>	·	<u></u>		

N = new indication; P = previously cleared by FDA (K111582)

Notes

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Prescription User (Per 21 CFR 801.109)

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510K 177-114



510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with L8-18i-D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation											
Clinical Application Anatomy/Region of Interest	В	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes	Harmonic Imaging	Coded Pulse	Other [Notes)	
Ophthalmic									•			
Fetal / Obstetrics ^[7]									-			
Abdominal ^[1]						ļ 						
Pediatric	P	P	P		Р	P	P	P	P	P	5,6	
Small Organ ^[2]	P	P	P		P	P	P.	• Р	P	Ρ.		
Neonatal Cephalic	P	P	P		P	P	P	P	P	P		
Adult Cephalic												
Cardiac Adult & Pediatric					ļ. <u>.</u>							
Peripheral Vascular	P	P	P		Р	P	P	P	P	P	3,5,6	
Musculo-skeletal Conventional	P	P	P		P	P	P	P	P	P	3,5,6	
Musculo-skeletal Superficial	P	P	P		P	P	P	P	P	P	3,5,6	
Other ^[4]		- · · · · · · · · · · · · · · · · · · ·										
Exam Type, Means of Access												
Transesophageal												
Transrectal ^[8]						·	ļ					
Transvaginal												
Transuretheral					<u></u>			٠				
Intraoperative ^[8]	P	P	P		P	P	P	P	P	P	3,5,6	
Intraoperative Neurological				,								
Intravascular									•		<u> </u>	
Laparoscopic												

N = new indication; P = previously cleared by FDA(K111582)

Notes

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostic Devices (OIVD)

Prescription User (Per 21 CFR 801.109)

(Division Sign-Off)
Division of Radiological Devices

Office of In Vitro Diagnostic Device Evaluation and Safety

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810K_172/14



510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with S4-10-D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation											
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color	Color M	Power Doppler	1	Harmonic Imaging	Coded Pulse	Other [Notes)	
Ophthalmic										_		
Fetal / Obstetrics ^[7]	P	P	P	P	P	P	P	P	P	P	5 .	
Abdominal ^[1]	P	P	P	P	P	P	P	P	P	P	5	
Pediatric	P	P	P	Р	P	P	P	P	P	P	5	
Small Organ ^[2]	P	P	P	Р	P	P	P	P	P	P	5	
Neonatal Cephalic	P	P	P	P	P	P	P	P	P	P_	5	
Adult Cephalic												
Cardiac Adult & Pediatric ·	P	P	P	P	P	P	Р	P	P	P		
Peripheral Vascular												
Musculo-skeletal Conventional									<u> </u>			
Musculo-skeletal Superficial												
Other ^[4]												
Exam Type, Means of Access												
Transesophageal								•				
Transrectal ^[8]												
Transvaginal												
Transuretheral												
Intraoperative ^[8]												
Intraoperative Neurological									<u> </u>	_	<u> </u>	
Intravascular												
Laparoscopic								<u> </u>				

N = new indication; P = previously cleared by FDA (K111582)

Notes

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostic Devices (OIVD)

Prescription User (Per 21 CFR 801.109)

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Division of Radiological Devices

Office of In Vitro Diagnostic Device Evaluation and Safety

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510K-172114



510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with P2D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

				<u> </u>	Мо	de of Oper	ation	-			
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler			Harmonic Imaging	Coded Pulse	Other [Notes)
Ophthalmic		<u> </u>									
Fetal / Obstetrics ^[7]		<u> </u>									•
Abdominal ^[1]											
Pediatric											
Small Organ ^[2]											
Neonatal Cephalic											
Adult Cephalic			P	P							
Cardiac Adult & Pediatric			P	P							
Peripheral Vascular			P	P							
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other ^[4]											
Exam Type, Means of Access											ļ
Transesophageal											
Transrectal ^[8]											
Transvaginal											
Transuretheral											
Intraoperative ^[8]											
Intraoperative Neurological											
Intravascular											
Laparoscopic										,	

N = new indication; P = previously cleared by FDA(K111582)

Notes

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Prescription User (Per 21 CFR 801.109)

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Office of In Vitro Diagnostic Device Evaluation and Safety

510K 12-114



510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with P6D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

					Mod	de of Oper	ation				
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color	Color M			Harmonic Imaging	Coded Pulse	Other [Notes)
Ophthalmic											
Fetal / Obstetrics ^[7]				L							
Abdominal ^[1]											
Pediatric								-			
Small Organ ^[2]											L
Neonatal Cephalic										٠	
Adult Cephalic			P	P							
Cardiac Adult & Pediatric			P	P							
Peripheral Vascular			P	P							
Musculo-skeletal Conventional	İ						·-	<u></u>			
Musculo-skeletal Superficial			<u> </u>								
Other ^[4]			<u> </u>								
Exam Type. Means of Access											_
Transesophageal			<u> </u>	<u> </u>							
Transrectal ^[8]											
Transvaginal				ļ . <u></u>							
Transuretheral											
Intraoperative ^[8]			1								
Intraoperative Neurological											
Intravascular						. <u>.</u>					
Laparoscopic			1	<u> </u>	<u> </u>						<u> </u>

N = new indication; P = previously cleared by FDA (K111582)

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostic Devices (OIVD)

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510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with RAB4-8-D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

			_		Mo	de of Oper	ation				[5,6] [5,6] [5,6]						
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse							
Ophthalmic											ļ						
Fetal / Obstetrics ^[7]	P	P	P		P	P	P	P	P	P	[5,6]						
Abdominal ^[1]	P	P	P		P	P	P	P	P	P	[5,6]						
Pediatric	P	P	P		P	P	P	P	P	P	[5,6]						
Small Organ ⁽²⁾											L.						
Neonatal Cephalic								<u> </u>			ļ <u> </u>						
Adult Cephalic																	
Cardiac Adult & Pediatric				ļ													
Peripheral Vascular			ļ. <u>.</u>	1							ļ						
Musculo-skeletal Conventional	P	P	P		P	P	P	P	P	P	[5,6]						
Musculo-skeletal Superficial						ļ					<u> </u>						
Other ^[4]	N	N	N		N	N_	N	N	N	N	[5,6]						
Exam Type. Means of Access Transesophageal						<u> </u>											
Transrectal ^[8]																	
Transvaginal																	
Transuretheral																	
Intraoperative ^[8]																	
Intraoperative Neurological	•																
Intravascular	_	 									<u> </u>						
Laparoscopic																	

N = new indication; P = previously cleared by FDA(K092271)

Notes

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with 11L-D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

							 				
	Mode of Operation										
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Other [Notes)
Ophthalmic								-			
Fetal / Obstetrics ^[7]											
Abdominal ^[1]	P	P	P		P	Р	P	P	P	P	[3,5,6]
Pediatric	P	P	P		P	P	P	P	P	P	[3,5,6]
Small Organ ^[2]	₽	P	P		P	P	P	P	P	P	[3,5,6]
Neonatal Cephalic											
Adult Cephalic											
Cardiac Adult & Pediatric								ļ			
Peripheral Vascular	P	P	P		P	P	P	P	P	P	[3,5,6]
Musculo-skeletal Conventional	P	P	P		P	P	P	P	P	P	[3,5,6]
Musculo-skeletal Superficial	P	P	P		P	Р	P	P	P	P	[3,5,6]
Other ^[4]		<u></u>		ļ <u>.</u>							
Exam Type, Means of Access											
Transesophageal											<u></u>
Transrectal ^[8]											
Transvaginal											
Transuretheral											
Intraoperative ^[8]						,					
Intraoperative Neurological											
Intravascular								ļ			
Laparoscopic			<u> </u>]							

N = new indication; P = previously cleared by FDA(K092271)

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D/4D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with 8C Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation										
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M	Power	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes)
Ophthalmic	<u></u>					•					
Fetal / Obstetrics ^[7]						<u> </u>					
Abdominal ^[1]	P	P	P		P	P	P	P	P	P	5
Pediatric	P	P	P		P	P	P	P	P	P	5
Small Organ ^[2]	P	P	P		P	P	P	P	P	P	5
Neonatal Cephalic	P	P	P		· P	P	P	P	P	P	5
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular								<u> </u>			
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other ^[4]						ļ					ļ <u>.</u>
Exam Type, Means of Access											
Transesophageal											
Transrectal ^[8]											
Transvaginal					<u> </u>			<u> </u>			<u> </u>
Transuretheral											
Intraoperative ^[8]											ļ
Intraoperative Neurological					<u> </u>	<u> </u>		<u> </u>			<u> </u>
Intravascular					<u> </u>						<u> </u>
Laparoscopic		<u> </u>		<u> </u>	<u> </u>						

N = new indication; P = previously cleared by FDA(K101874)

Notes:

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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510K/27-114



510(k) Premarket Notification Submission

Diagnostic Ultrasound Indications for Use Form GE LOGIQ S7 Expert and LOGIQ S7 Pro with 3Sp-D Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

		,			Mod	de of Oper	ation				P 5,6 P 5,6 P 5,6						
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler		Combined Modes	Harmonic Imaging	Coded Pulse							
Ophthalmic																	
Fetal / Obstetrics ^[7]	P	P	P	P	P	P	P	P	P	P	5,6						
Abdominal ^[1]	P	P	P	P	P	P	P	P	P	P	5,6						
Pediatric	P	P	P	P	P	P	P	Р	P	P	5,6						
Small Organ ^[2]	•										<u> </u>						
Neonatal Cephalic				<u></u>						ļ	<u> </u>						
Adult Cephalic	P	P	P	. Р	P	P	P	P	P	P	<u> </u>						
Cardiac Adult & Pediatric	P	P	P	Ρ.	P	P	P	P	P	P							
Peripheral Vascular								ļ		٠							
Musculo-skeletal Conventional						ļ											
Musculo-skeletal Superficial						<u> </u>		ļ <u> </u>			ļ						
Other ⁽⁴⁾				<u> </u>													
Exam Type. Means of Access								<u></u>			<u> </u>						
Transesophageal											<u> </u>						
Transrectal ^[8]										<u> </u>							
Transvaginal					ļ. <u></u>	ļ											
Transuretheral						ļ	<u>.</u>										
Intraoperative ^[8]																	
Intraoperative Neurological																	
Intravascular											<u> </u>						
Laparoscopic					1				}	l							

N = new indication; P = previously cleared by FDA(K112213)

Notes

- [1] Abdominal includes Renal, GYN/Pelvic.
- [2] Small organ includes breast, testes and thyroid
- [3] Elastography Imaging Elasticity.
- [4] Other use includes Urology/Prostate
- [5] 3D Imaging mode
- [6] Needle guidance imaging
- [7] Includes infertility monitoring of follicle development
- [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
- [*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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